TABLE 4

Complementary Peptide Effects on Resting PMNs

Complementary Peptides	Agonist Activity
RTR tetramer	None, ≤ 8 mM
RTR dimer	None, ≤ 8 mM
RTR	None, ≤ 40 mM
RTRGG	None, ≤ 40 mM
ASA tetramer	None, ≤ 16 mM

* Untreated PMNs (negative control) produced a polarization response of 8.0% ± 3.2% (n = 8). Agonistic activity was determined from five dose response curves for each complementary peptide.

EXAMPLE 10

Arginine-Threonine-Arginine Tetrameric Antisense Peptide Reduces Corneal Ulceration In The Alkali-Injured Rabbit Eye

Materials

Sodium phosphate monobasic and sodium phosphate dibasic were obtained from Fisher Scientific (Fair Lawn, NJ). Solvents for peptide synthesis were purchased from Fisher Scientific Products (West Chester, PA), while the reagents were from Perseptive Biosystem (Framingham, MA). Fmoc-d-Arg(Pbf)-OH and Fmoc-d-Thr(tBu)-OH were from Chem-Impex (Wood Dale, IL).

Peptide Synthesis

The RTR tetrameric peptide ($(H_2N$-Arg-Thr-Arg-Gly-Gly$)_2$-Lys$)_2$-Lys-Ala-$CONH_2$), containing levorotatory (L) RTR sequences, was synthesized using Solid Phase Peptide synthesis following Fmoc methodology on a 9050 Peptide synthesizer from Perseptive Biosystem. This tetrameric peptide was synthesized starting from a Fmoc-Alanine-PEG-PS resin, with either one or two

coupling cycles with Fmoc-K-Fmoc-OH activated with HATU/DIPEA. The following couplings were achieved using Fmoc amino acids activated with HATU/DIPEA. The Fmoc deprotection reagent was 1% DBU, 1% Piperidine in dimethylformamide. The peptide was cleaved from the resin by adding 10 ml of trifluoroacetic acid (TFA)/phenol/thioanisol/H_2O/ethandithiol 93/2/2/2/1 and incubated at room temperature for 5 hours. The mixture was filtered and the peptide precipitated in cold ethyl ether. The precipitate was collected and solubilized in H_2O for lyophilization. The peptide was purified by reverse phase high performance liquid chromatography (RP-HPLC), using a Dynamax RP C18 (300x10mm i.d.), and equilibrated at 3 ml/min using a linear gradient from 5% CH_3CN to 60% CH_3CN in 0.1% TFA in 40 minutes. The fractions containing the peptide were acidified with 1 N HCl to help in the elimination of TFA, and lyophilized. Peptide identity was confirmed by time of flight matrix assisted laser desorption ionization mass spectroscopy. Purity was confirmed by analytical RP-HPLC.

The RTR tetrameric peptide ((H_2N-d-Arg-d-Thr-d-Arg-Gly-Gly)$_2$-Lys)$_2$-Lys-Ala-$CONH_2$), containing dextrorotatory (D) RTR sequences (only RTR was d conformation, the glycines and the